Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305242M *I Unmanned Aerial Systems (UAS) Payloads*

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	5.956	10.004	5.000	9.274	-	9.274	-	-	-	-	-	-
2052: *RQ-21 Payload Development*	5.956	3.704	0.000	0.000	-	0.000	-	-	-	-	-	-
8277: *UAS Payloads*	0.000	0.000	5.000	9.274	-	9.274	-	-	-	-	-	-
9999: *Congressional Adds*	0.000	6.300	0.000	0.000	-	0.000	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Unmanned Aircraft Systems (UAS) Sensor Payload program provides the capability to develop, integrate, field, and sustain tactical Intelligence, Surveillance, and Reconnaissance (ISR) payloads and enabling technologies for Group 1-3 aerial platforms in the USMC Family of UAS. In support of Force Design 2030 initiative, tactical UAS ISR is primarily focused on Marine Littoral Regiments (MLR) and on Marine Expeditionary Units (MEU) to enhance their ability to operate within an operating environment characterized by Great Power Competition.

In support of the Commandant of the Marine Corps (CMC) 2019 Planning Guidance and service Force Design 2030 requirements, UAS sensor payloads provide modular, low-cost aerial sensing technologies to achieve the Maritime Domain Awareness required by MLRs and MEUs in support of the Joint Forces Maritime Component Command (JFMCC). Within the context of Maritime Domain Operations, Marine forces executing Expeditionary Advanced Base Operations (EABO) require the organic capability to establish and maintain awareness of adversaries and potential adversary activities in communications and navigation degraded or denied environments. UAS Payloads enable sensing of threat indicators across the electromagnetic, gravimetric, chemical, nuclear, and acoustic spectrums and within the visual and radar spectrum, with reduced signature, and minimized risk to personnel. The incorporation of advanced technology enablers such as artificial intelligence/ machine learning (AI/ML) and precision geolocation provide automated recognition, identification, tracking, advanced networks, advanced communications, and cross-cueing in support of accelerated battlespace awareness and targeting. As an essential element of the kill chain, UAS payloads are critical to the JFMCC targeting process to find, fix, track, target, engage, and assess the effects of lethal and non-lethal fires.

Employment of UAS payloads on platforms distributed across the MLRs and MEUs during EABO allows for greater distribution of forces while maintaining persistent awareness, enhances the security of tactical units and personnel moving across the battlespace, and enables the rapid transition between positions necessary for force survivability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305242M *I Unmanned Aerial Systems (UAS) Payloads*

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	10.004	5.000	2.320	-	2.320
Current President's Budget	10.004	5.000	9.274	-	9.274
Total Adjustments	0.000	0.000	6.954	-	6.954
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	7.067	-	7.067
• Rate/Misc Adjustments	0.000	0.000	-0.113	-	-0.113

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2020	FY 2021
Project: 9999: *Congressional Adds*		
Congressional Add: *Spectral and Reconnaissance Imagery for Tactical Exploitation*	6.300	0.000
Congressional Add Subtotals for Project: 9999	6.300	0.000
Congressional Add Totals for all Projects	6.300	0.000

Change Summary Explanation

The net increase of $4.274M from FY 2021 to FY 2022 is primarily due to addressing capability gaps by providing engineering services, development and evaluation services, and training services for payload development and engineering analysis for payloads specializing in AI/ML, Enhanced EO, SIGINT/ES and SAR/MTI. Schedules have been updated to reflect Marine Corps Force Design 2030.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*				Project (Number/Name) 2052 / *RQ-21 Payload Development*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
2052: *RQ-21 Payload Development*	5.956	3.704	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Unmanned Aerial System (UAS) Payload Program will provide an agile and responsive means to integrate and support the development and fielding of Strategic and Tactical Intelligence, Surveillance, and Reconnaissance (ISR) and non-ISR capabilities as well as data Processing, Exploitation, and Dissemination (PED) and Communication capabilities for all UAS's within the Navy and Marine Corps. These component, sensor, and PED capabilities will address Navy and Marine Corps ISR mission needs and gaps caused by rapidly changing missions, environments, threats, and technologies as well as enhance the effectiveness and operational utility of the UAS.

The UAS Payload program element will increase the effectiveness and versatility of the Navy and Marine Corps UAS. The UAS Payload program element encompasses current and future emerging UAS technology and improvements such as GPS denied environment survey and solutions, Position, Navigation and Timing (PNT), Communication, Automation and Autonomy, Magnetic Anomaly Detection (MAD), Chemical, Biological, and Radiological/Nuclear (CBRN) collection, Gravitational Sensing, Signals Intelligence Collection (SIGINT), Electronic Warfare Support (EW and ES), Radar Imagery, Moving Target Indicator (MTI) Detection, Tracking and Imagery, Wide Area Imaging and Search, Advanced Electro-Optic to include Multi and Hyperspectral Imagery collection, Artificial Intelligence (AI) processing, Combined Multiple Intelligence (Multi-INT), Light Detection and Ranging (LiDAR), Laser Marking and Designation (LM, LD), Acoustic Detection, Sense and Avoid, Identification of Friend or Foe (IFF), Weapons Integration, capability related PED, and Multi Mission functionality. These advanced capabilities and payloads will provide the Navy Fleet Forces and Marine Corps and their component subordinate commands (divisions and regiments) with dedicated, organic capabilities that facilitate the Marine Corps ISR Enterprise (MCISRE) across the range of military operations.

The program develops and transitions strategic and tactical sensor and PED capabilities to UAS in the areas of SIGINT and Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) and continuing the integration and prototype mission kit development work in the area of Multiple Intelligence (Multi-INT) and Wide Area Surveillance (WAS) capabilities.

SIGINT - Locate, target, and exploit adversary Signals of Interest (SOI), ability to cue other ISR sensors to specific target geolocations.

Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) - Locate and track ground targets day or night under a wide range of atmospheric conditions and at stand-off ranges exceeding those of EO/IR Full Motion Video (FMV) technologies.

Multiple Intelligence (Multi-INT) - Simultaneous area of regard ISR data collection and functionality of sensors operating in widely disparate modalities such as Communications Relay, EW/ES, SIGINT, Radar, and EO/IR. Enables the collection of synchronized data that maximizes the effective employment envelope by

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*

collectively decreasing uncertainties, such as geolocation accuracy, simultaneously prosecuting multiple targets of interest and maximizing datalink capability across a varied range of environments and temporal periods.

Wide Area Persistent Surveillance (WAS) - Imaging over wide areas (multiple square kilometers, city size area) at very spacial and temporal resolution at substantial stand-off distances with full motion video (FMV) access, picture in picture user defined watch boxes, and ability to cue other ISR sensors to specific target geolocations. Ability to monitor and disseminate processed imagery data and static full field of view or user defined FMV watch box imagery and disseminate to ground-based disadvantaged users. Mission applications include battlefield situational awareness and monitoring, providing the capability to assure access and hold at risk, as well as enabling power projection in environments that are not currently accessible.

Processing, Exploitation, and Dissemination (PED) technologies enable minimization of the physical footprint of the UAS system with enhanced mission capabilities and the sharing and merging of data across multiple domains. Artificial Intelligence (AI) and Automated Processing supports the rapid detection, tracking, and characterization in all ISR data types and provides actionable information for fusion and tracking exploitation systems and processes.

Note: In FY 2019, PE 0305242M/PU 5501, 5502, and 5504 were consolidated to PE 0305242M/PU 2052 (Unmanned Aerial Systems (UAS) Payloads/RQ-21 Payload Development). In FY 2021, PE 0305242M/PU 2052 (Unmanned Aerial Systems (UAS) Payloads/RQ-21 Payload Development) transitioned to 0305242M/PU 8277 (Unmanned Aerial Systems (UAS) Payloads/UAS Payloads).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Product Development	3.279	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
Title: Support	0.096	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: N/A					
FY 2022 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A ***FY 2022 OCO Plans:*** N/A					
Title: Test and Evaluation	0.320	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: N/A ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A					
Title: Management Services	0.009	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2021 Plans: N/A ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	3.704	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APN/0444: *STUASLO*	40.740	37.650	13.151	-	13.151	-	-	-	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*

D. Acquisition Strategy

The UAS Payload program utilizes a hybrid acquisition model. Development typically follows an incremental or spiral approach but also leverages evolutionary and single step to full capability processes. Advanced payloads leverages work conducted by small business as well as large commercial industry vendors, academic and Federally Funded Research and Development Centers (FFRDC), and various government laboratories such as the Office of Naval Research (ONR), Defense Advanced Research Projects Agency (DARPA), Marine Corps Warfighting Laboratory (MCWL), Air Force Research Lab (AFRL), Joint Improvised Threat Defeat Agency (JIDA), the National Security Agency (NSA), and the National Geospatial Agency (NGA). The UAS payloads portfolio consists of a family of capabilities and spans a broad spectrum of capability areas. Capabilities are transitioned from variously sourced, high (5-7) Technology Readiness Level (TRL) science and technology (S&T) projects to the UAS Payloads portfolio for completion of RDTE of the capability, systems engineering development into payload suites, and entrance into the fielding process for integration into Unmanned Aircraft Systems (UAS). Payload suites provide capabilities that facilitate the critical functions of the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) across the range of military operations.

The acquisition paths are defined by three (3) phases, each marked by a decision gate. Phase I establishes the preliminary integration design concept and conduct of technology demonstration with validation of a Technology Readiness Level (TRL) 6/7 as the decision gate for entry into Phase II. Phase II establishes full payload-to-Unmanned Aircraft System (UAS) integration during which time all necessary program management, engineering, fabrication, test, and evaluations activities are conducted to achieve Test Article Fabrication, System Test and Evaluation, Integrated Logistics Support (ILS) and Training Concept development, and Data Management and Documentation. Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of TRL 9 constitute the decision gate for entry into Phase III. Phase III is a transition which supports a production decision based on the exit criteria from Phase II.

The UAS Payload program partners with UAS programs to identify required payloads. This includes the following: conduct RDTE processes to develop capability into TRL9 payload and production level prototypes; conduct Developmental and Operational testing (DT/OT); production kits delivered to receiving UAS platform program with initial year sustainment, receiving program is responsible for long-term sustainment funding.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering SIGINT	MIPR	NSA : Washington DC	4.017	2.786	Sep 2020	0.000		0.000		-		0.000	-	-	-
Government Engineering	WR	NAWCAD : Patuxent River, MD	0.495	0.493	Jan 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	4.512	3.279		0.000		0.000		-		0.000	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various : Various	0.846	0.096	Jan 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.846	0.096		0.000		0.000		-		0.000	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NAWCAD : Patuxent River, MD	0.303	0.320	Aug 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.303	0.320		0.000		0.000		-		0.000	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCAD : Patuxent River, MD	0.244	0.000		0.000		0.000		-		0.000	-	-	-
Travel	Various	Various : Various	0.051	0.009	Dec 2019	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.295	0.009		0.000		0.000		-		0.000	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 2052 / *RQ-21 Payload Development*	

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.956	3.704		0.000		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*

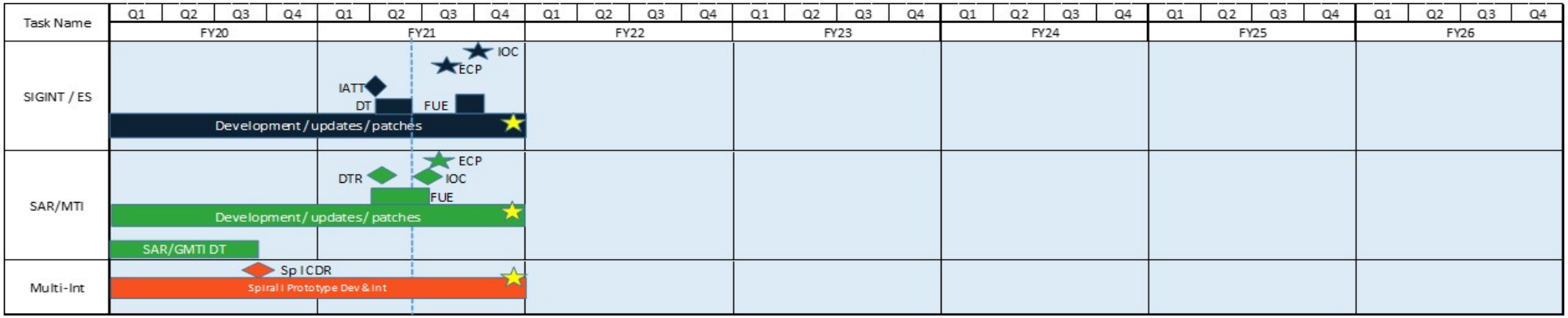

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2052 / *RQ-21 Payload Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2052				
SIGINT/ES: SIGINT/ES Interim Operating Capability (IOC)	4	2021	4	2021
SIGINT/ES: SIGINT/ES Engineering Change Proposal (ECP)	3	2021	3	2021
SIGINT/ES: SIGINT/ES Interim Authority to Test (IATT)	2	2021	2	2021
SIGINT/ES: SIGINT/ES Developmental Test (DT)	1	2020	2	2021
SIGINT/ES: SIGINT/ES Field User Evaluation (FUE)	3	2021	4	2021
SIGINT/ES: SIGINT/ES Development	1	2020	4	2021
SIGINT/ES: SIGINT/ES Software Delivery	4	2021	4	2021
SAR/MTI: SAR/MTI Engineering Change Proposal (ECP)	3	2021	3	2021
SAR/MTI: SAR/MTI Developmental Test Report (DTR)	2	2021	2	2021
SAR/MTI: SAR/MTI Initial Operational Capability (IOC)	3	2021	3	2021
SAR/MTI: SAR/MTI Field User Evaluation (FUE)	2	2021	3	2021
SAR/MTI: SAR/MTI Development	1	2020	4	2021
SAR/MTI: SAR/MTI Software Delivery	4	2021	4	2021
Multi-Int: Multi-Int Spiral I Critical Design Review (CDR)	3	2020	3	2020
Multi-Int: Multi-Int Spiral I Prototype Development and Integration	1	2020	4	2021
Multi-Int: Multi-Int Spiral I Software Delivery	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 8277 / *UAS Payloads*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
8277: *UAS Payloads*	0.000	0.000	5.000	9.274	-	9.274	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Unmanned Aircraft Systems (UAS) Sensor Payload program provides the capability to develop, integrate, field, and sustain tactical Intelligence, Surveillance, and Reconnaissance (ISR) payloads and enabling technologies for Group 1-3 aerial platforms in the USMC Family of UAS. In support of Force Design 2030 initiative, tactical UAS ISR is primarily focused on Marine Littoral Regiments (MLR) and on Marine Expeditionary Units (MEU) to enhance their ability to operate within an operating environment characterized by Great Power Competition.

In support of the Commandant of the Marine Corps (CMC) 2019 Planning Guidance and service Force Design 2030 requirements, UAS sensor payloads provide modular, low-cost aerial sensing technologies to achieve the Maritime Domain Awareness required by MLRs and MEUs in support of the Joint Forces Maritime Component Command (JFMCC). Within the context of Maritime Domain Operations, Marine forces executing Expeditionary Advanced Base Operations (EABO) require the organic capability to establish and maintain awareness of adversaries and potential adversary activities in communications and navigation degraded or denied environments. UAS Payloads enable sensing of threat indicators across the electromagnetic, gravimetric, chemical, nuclear, and acoustic spectrums and within the visual and radar spectrum, with reduced signature, and minimized risk to personnel. The incorporation of advanced technology enablers such as artificial intelligence/ machine learning (AI/ML) and precision geolocation provide automated recognition, identification, tracking, advanced networks, advanced communications, and cross-cueing in support of accelerated battlespace awareness and targeting. As an essential element of the kill chain, UAS payloads are critical to the JFMCC targeting process to find, fix, track, target, engage, and assess the effects of lethal and non-lethal fires.

Employment of UAS payloads on platforms distributed across the MLRs and MEUs during EABO allows for greater distribution of forces while maintaining persistent awareness, enhances the security of tactical units and personnel moving across the battlespace, and enables the rapid transition between positions necessary for force survivability.

The program prototypes, develops, integrates, and transitions strategic and tactical sensors, payloads, and communication capabilities for Processing, Exploitation, and Dissemination (PED) capabilities to UAS in the areas of Signals Intelligence (SIGINT)/Electronic Warfare Support (ES), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Multiple Intelligence (Multi-INT), Wide Area Surveillance (WAS) / Wide Area Motion Imagery (WAMI), AI/ ML, Enhanced Electro-Optic (EO), Electronic Attack (EA)/ High Power Microwave (HPM)/ Electromagnetic Pulse (EMP), Advanced EO/Infrared (IR)/Multi-spectral (MSI)/Hyperspectral (HSI) sensors, Autonomous operations, Advanced processors, Chemical, biological, radiological, and nuclear (CBRN) sensors, Light Detection and Ranging (LiDAR), Alt-Nav, Acoustics, Cross Domain Solutions (CDS) for all sensor modalities, Interfaces for payloads, Gravimetric, Communications, and Advanced Networks capabilities.

SIGINT/ES - Detect, locate, target, and exploit adversary Signals of Interest (SOI), ability to cue other ISR sensors to specific target geolocations.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

SAR/MTI - Locate and track ground targets day or night under a wide range of atmospheric conditions and at stand-off ranges exceeding those of EO/IR Full Motion Video (FMV) technologies.

Multi-INT - Simultaneous area of regard ISR data collection and functionality of sensors operating in widely disparate modalities such as Communications Relay, EW/ES, SIGINT, Radar, and EO/IR. Enables the collection of synchronized data that maximizes the effective employment envelope by collectively decreasing uncertainties, such as geolocation accuracy, simultaneously prosecuting multiple targets of interest and maximizing datalink capability across a varied range of environments and temporal periods.

Wide Area Surveillance (WAS)/Wide Area Motion Imagery (WAMI) - Imaging over wide areas (multiple square kilometers, city size area) at very spatial and temporal resolution at substantial stand-off distances using various sensor modalities, with full motion video (FMV) access, picture in picture user defined watch boxes, and ability to cue other ISR sensors to specific target geolocations. Ability to monitor and disseminate processed imagery data and static full field of view or user defined watch box imagery and disseminate to ground-based disadvantaged users. Mission applications include battlefield situational awareness and monitoring, providing the capability to assure access and hold at risk, as well as enabling power projection in environments that are not currently accessible.

AI/ML - This effort will place AI/ML edge processing on a small UAS to perform object detection, classification, and identification of targets of interest in the data stream in real time. Edge processing technologies enable minimization of the physical footprint of the UAS system with enhanced mission capabilities and the sharing and merging of data across multiple domains. AI and Automated Processing supports the rapid detection, tracking, and characterization in all ISR data types and provides actionable information for fusion and tracking exploitation systems and processes.

Enhanced EO - System that uses multiple high-resolution cameras to observe a wide area simultaneously. Enhance EO will also provide object detection, Classification, and Identification of targets of interest.

Note: In FY 2021, funding was added back into this PE/Project to better support ISR Payload requirements. Budget increase enables transition from Group 3 to Group 2 payloads necessitated by divestment of RQ-21A and adoption of Group 2 Long Range/Long Endurance UAS across FMF as a result of service Force Design determination enabling conduct of EABO by MLRs supporting Naval Forces.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Product Development	0.000	4.230	8.429	0.000	8.429
Articles:	-	-	-	-	-
FY 2021 Plans: - SIGINT/ES product correction of deficiencies & requested enhancements - SAR/MTI product correction of deficiencies & requested enhancements - Improve lab capabilities for Group 1/2 platforms - Integrate AI/ML capability on Group 1/2 platforms					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Integrate Enhanced EO capability on Group 1/2 platforms ***FY 2022 Base Plans:*** - SIGINT/ES product correction of deficiencies & requested enhancements - SAR/MTI product correction of deficiencies & requested enhancements - Improve lab capabilities for Group 1/2 platforms - Integrate AI/ML capability on Group 1/2 platforms - Integrate Enhanced EO capability on Group 1/2 platforms - Transition Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) of advanced technologies and payloads to UAS programs. - Evaluate new sensor technologies and prototype design and fabrication in support of the development and fielding operations of UAS platforms and payloads. - Additive manufacturing techniques, tools, processes and requirements to enable installation production capability for UAS components. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The FY2022 budget increase of $4.199M helps address capability gaps by providing engineering services, development and evaluation services, and training services for payload development and engineering analysis for payloads specializing in AI/ML, Enhanced EO, SIGINT/ES and SAR/MTI.					
Title: Support	0.000	0.392	0.395	0.000	0.395
Articles:	-	-	-	-	-
FY 2021 Plans: -Continue government engineering technical support, other government support, program management support. Allow for slight increase in program related travel in support of payload systems. -Continue Integrated Logistics Support (ILS), training concept development and data management/ documentation. ***FY 2022 Base Plans:*** -Continue government engineering technical support, other government support, program management support.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
-Continue Integrated Logistics Support (ILS), training concept development and data management/ documentation. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The FY 2022 budget increase of $0.003M due to additional logistical support for payload training development.					
Title: Test and Evaluation	0.000	0.295	0.300	0.000	0.300
Articles:	-	-	-	-	-
FY 2021 Plans: -Continue developmental and operational payload testing ***FY 2022 Base Plans:*** -Continue developmental and operational payload testing ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The FY 2022 budget increase of $0.005M due to additional cyber payload test requirements.					
Title: Management Services	0.000	0.083	0.150	0.000	0.150
Articles:	-	-	-	-	-
FY 2021 Plans: Government program management support of the SIGINT/ES, SAR/MTI, AI/ML, and Enhanced EO capabilities. Management Services will account for Cross-Organization travel funding requirements. ***FY 2022 Base Plans:*** Government program management support of the SIGINT/ES, SAR/MTI, AI/ML, and Enhanced EO capabilities. Management Services will account for Cross-Organization travel funding requirements. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
The FY 2022 budget increase of $0.067M due to additional program management support.					
Accomplishments/Planned Programs Subtotals	0.000	5.000	9.274	0.000	9.274

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• PMC/4787: *UAS Payloads*	0.000	5.489	3.730	-	3.730	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The UAS Payload program utilizes a hybrid acquisition model. Development typically follows an incremental or spiral approach but also leverages evolutionary and single step to full capability processes. Advanced payloads leverages work conducted by small business as well as large commercial industry vendors, academic and Federally Funded Research and Development Centers (FFRDC), and various government laboratories such as the Office of Naval Research (ONR), Defense Advanced Research Projects Agency (DARPA), Marine Corps Warfighting Laboratory (MCWL), Air Force Research Lab (AFRL), Joint Improvised Threat Defeat Agency (JIDA), the National Security Agency (NSA), and the National Geospatial Agency (NGA). The UAS payloads portfolio consists of a family of capabilities and spans a broad spectrum of capability areas. Capabilities are transitioned from variously sourced, high (5-7) Technology Readiness Level (TRL) science and technology (S&T) projects to the UAS Payloads portfolio for completion of RDTE of the capability, systems engineering development into payload suites, and entrance into the fielding process for integration into Unmanned Aircraft Systems (UAS). Payload suites provide capabilities that facilitate the critical functions of the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) across the range of military operations.

The acquisition paths are defined by three (3) phases, each marked by a decision gate. Phase I establishes the preliminary integration design concept and conduct of technology demonstration with validation of a Technology Readiness Level (TRL) 6/7 as the decision gate for entry into Phase II. Phase II establishes full payload-to-Unmanned Aircraft System (UAS) integration during which time all necessary program management, engineering, fabrication, test, and evaluations activities are conducted to achieve Test Article Fabrication, System Test and Evaluation, Integrated Logistics Support (ILS) and Training Concept development, and Data Management and Documentation. Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of TRL 9 constitute the decision gate for entry into Phase III. Phase III is a transition which supports a production decision based on the exit criteria from Phase II.

The UAS Payload program partners with UAS programs to identify required payloads. This includes the following: conduct RDTE processes to develop capability into TRL9 payload and production level prototypes; conduct Developmental and Operational testing (DT/OT); production kits delivered to receiving UAS platform program with initial year sustainment, receiving program is responsible for long-term sustainment funding.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering SIGINT/ES	MIPR	NIWC : San Diego, CA	0.000	0.000		0.000		0.945	Dec 2021	-		0.945	-	-	-
Systems Engineering SAR/ MTI	SS/BOA	ImSAR : Springville, UT	0.000	0.000		0.000		0.800	Dec 2021	-		0.800	-	-	-
Systems Engineering AI/ ML	MIPR	JHU/APL : Baltimore, MD	0.000	0.000		0.500	Apr 2021	1.000	Apr 2022	-		1.000	-	-	-
Systems Engineering Enhanced EO	MIPR	Sentient : Not Specified	0.000	0.000		0.200	Apr 2021	1.000	Apr 2022	-		1.000	-	-	-
Government Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.895	Dec 2020	1.634	Dec 2021	-		1.634	-	-	-
Lab	MIPR	DLA : Philadelphia, PA	0.000	0.000		1.475	Apr 2021	0.000		-		0.000	-	-	-
DTIC	MIPR	DTIC : Ft. Belvoir, VA	0.000	0.000		0.495	Apr 2021	3.000	Apr 2022	-		3.000	-	-	-
SCCA/SRA	MIPR	Render SE : Lexington Park, MD	0.000	0.000		0.250	Apr 2021	0.000		-		0.000	-	-	-
Alt Nav / PNT	MIPR	TSC : Arlington, VA	0.000	0.000		0.415	Apr 2021	0.050	Apr 2022	-		0.050	-	-	-
		Subtotal	0.000	0.000		4.230		8.429		-		8.429	-	-	N/A

Remarks

With the increased budget for Product Development from FY21 to FY22, additional capability will be funded for SIGINT/ES, SAR/MTI, AI/ML, and Enhanced EO. This increase will also fund integration and development of these capabilities. The increase in Government Engineering provides funding to support engineering and integration efforts required to support these additional capabilities.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various : Various	0.000	0.000		0.392	Dec 2020	0.395	Dec 2021	-		0.395	-	-	-
		Subtotal	0.000	0.000		0.392		0.395		-		0.395	-	-	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 8277 / *UAS Payloads*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.295	Dec 2020	0.300	Dec 2021	-		0.300	-	-	-
		Subtotal	0.000	0.000		0.295		0.300		-		0.300	-	-	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.063	Dec 2020	0.130	Dec 2021	-		0.130	-	-	-
Travel	Various	Various : Various	0.000	0.000		0.020	Oct 2020	0.020	Oct 2021	-		0.020	-	-	-
		Subtotal	0.000	0.000		0.083		0.150		-		0.150	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		5.000		9.274		-		9.274	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

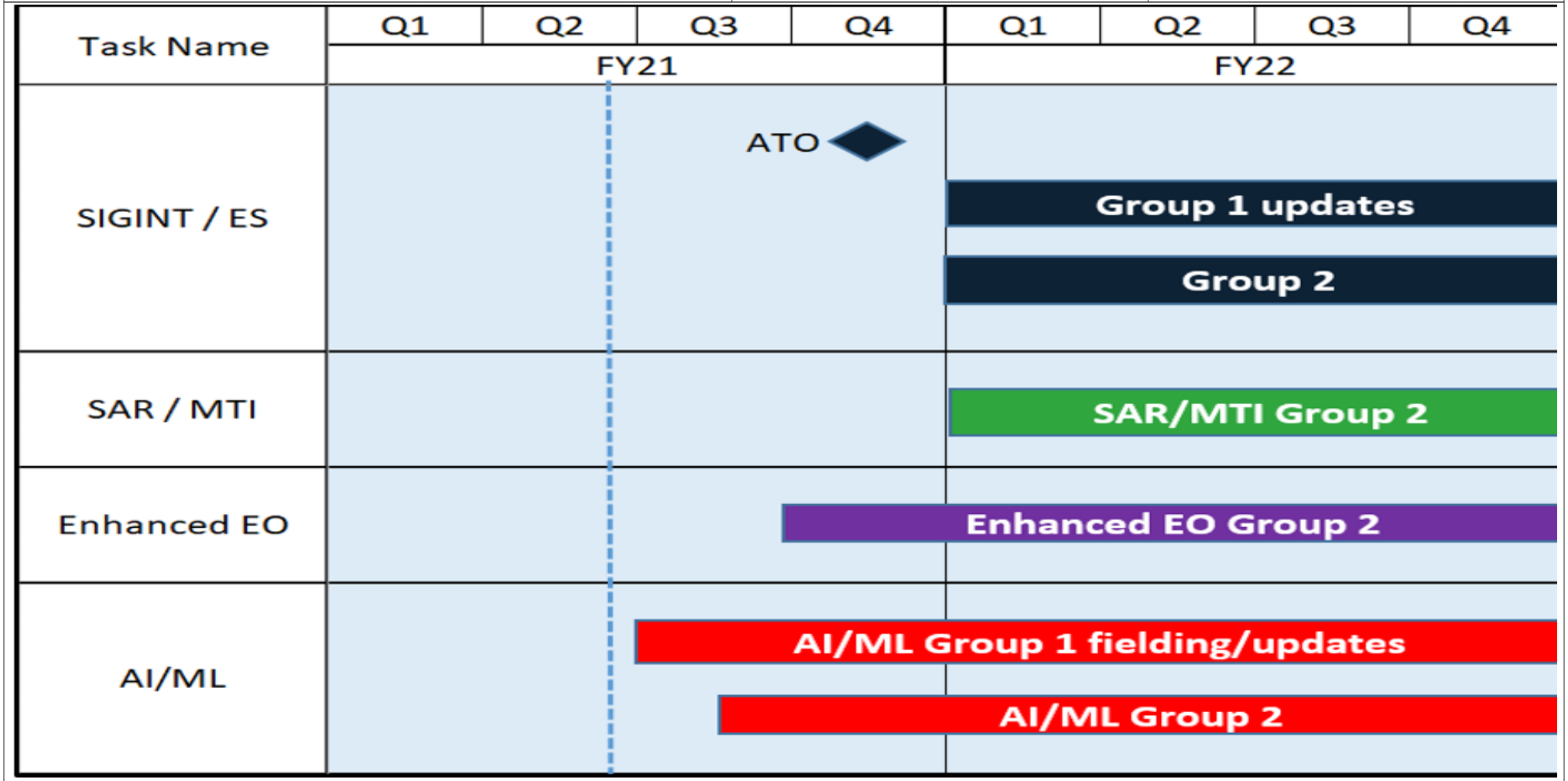

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 8277 / *UAS Payloads*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 8277				
SIGINT/ES: SIGINT/ES Authority To Operate (ATO)	4	2021	4	2021
SIGINT/ES: SIGINT/ES Group 1 Updates	1	2022	4	2022
SIGINT/ES: SIGINT/ES Group 2 Integration	1	2022	4	2022
SAR/MTI: SAR/MTI Group 2 Integration	1	2022	4	2022
Enhanced EO: Enhanced EO Group 2 Integration	3	2021	4	2022
AI/ML: AI/ML Group 1 Modification	3	2021	4	2022
AI/ML: AI/ML Group 2 Integration	3	2021	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 9999 / *Congressional Adds*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
9999: *Congressional Adds*	0.000	6.300	0.000	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Congressional Add for Spectral and Reconnaissance Imagery for Tactical Exploitation (SPRITE) continues the maturation, integration, and testing of a Group III UAS Intelligence Surveillance and Reconnaissance (ISR) infra-red (IR) wide area surveillance (WAS) capability. This effort transitions the advanced imaging and data collection and processing technologies developed by the Office of Naval Research SPRITE program into an operational ISR system. Combined, the USMC and CA funds are providing prototype payloads to meet field user evaluations and operational testing requirements.

Group III Wide Area Surveillance (WAS) provides the Marine Air Ground Task Force (MAGTF) with an organic airborne enhanced day/night electro-optic capability. The WAS payload collects and records high resolution Electro Optical / Infrared (EO/IR) images over an instantaneous several kilometer field of regard in order to conduct persistent surveillance of large areas of interest, in near real time, while recording data to enable forensics. Mission applications include situational awareness and site monitoring at significant standoff ranges and altitudes, providing the capability to assure access and hold at risk, as well as enabling power projection in inaccessible environments. It will provide the Marine Corps disadvantaged users spectral and reconnaissance imagery for tactical exploitation and the ability to disseminate multiple high resolution sub-sampled imagery windows to multiple users from a small tactical UAS.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2020	FY 2021
Congressional Add: Spectral and Reconnaissance Imagery for Tactical Exploitation	6.300	0.000
FY 2020 Accomplishments: N/A		
FY 2021 Plans: N/A		
Congressional Adds Subtotals	6.300	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The UAS Payload program utilizes a hybrid acquisition model. Development typically follows an incremental or spiral approach but also leverages evolutionary and single step to full capability processes. Advanced payloads leverages work conducted by small business as well as large commercial industry vendors, academic and Federally Funded Research and Development Centers (FFRDC), and various government laboratories such as the Office of Naval Research (ONR), Defense Advanced Research Projects Agency (DARPA), Marine Corps Warfighting Laboratory (MCWL), Air Force Research Lab (AFRL), Joint Improvised Threat Defeat Agency (JIDA),

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 9999 / *Congressional Adds*

the National Security Agency (NSA), and the National Geospatial Agency (NGA). The UAS payloads portfolio consists of a family of capabilities and spans a broad spectrum of capability areas. Capabilities are transitioned from variously sourced, high (5-7) Technology Readiness Level (TRL) science and technology (S&T) projects to the UAS Payloads portfolio for completion of RDTE of the capability, systems engineering development into payload suites, and entrance into the fielding process for integration into Unmanned Aircraft Systems (UAS). Payload suites provide capabilities that facilitate the critical functions of the Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) across the range of military operations.

The acquisition paths are defined by three (3) phases, each marked by a decision gate. Phase I establishes the preliminary integration design concept and conduct of technology demonstration with validation of a Technology Readiness Level (TRL) 6/7 as the decision gate for entry into Phase II. Phase II establishes full payload-to-Unmanned Aircraft System (UAS) integration during which time all necessary program management, engineering, fabrication, test, and evaluations activities are conducted to achieve Test Article Fabrication, System Test and Evaluation, Integrated Logistics Support (ILS) and Training Concept development, and Data Management and Documentation. Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of TRL 9 constitute the decision gate for entry into Phase III. Phase III is a transition which supports a production decision based on the exit criteria from Phase II.

The UAS Payload program partners with UAS programs to identify required payloads. This includes the following: conduct RDTE processes to develop capability into TRL9 payload and production level prototypes; conduct Developmental and Operational testing (DT/OT); production kits delivered to receiving UAS platform program with initial year sustainment, receiving program is responsible for long-term sustainment funding.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 9999 / *Congressional Adds*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering (WAS)	SS/BOA	Logos : Fairfax, VA	0.000	5.351	Jan 2021	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	5.351		0.000		0.000		-		0.000	-	-	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various : Various	0.000	0.624	Apr 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	0.624		0.000		0.000		-		0.000	-	-	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NAWCAD : Patuxent River, MD	0.000	0.325	Aug 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	0.000	0.325		0.000		0.000		-		0.000	-	-	N/A

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.300		0.000		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 9999 / *Congressional Adds*

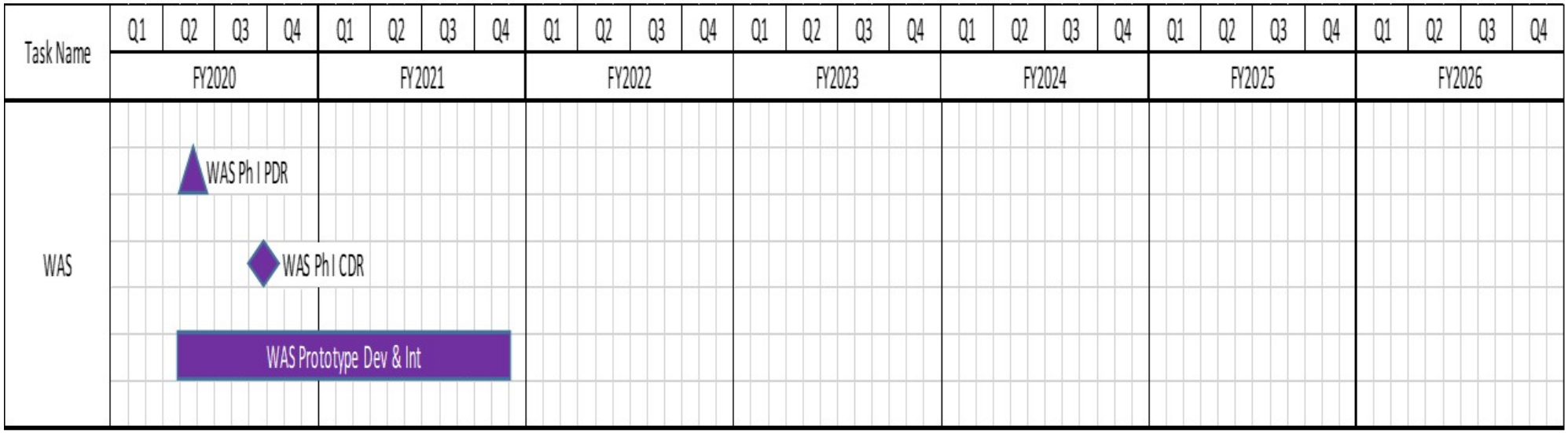

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
SPRITE (WAS): WAS Phase I Preliminary Design Review (PDR)	2	2020	2	2020
SPRITE (WAS): WAS Phase I Critical Design Review (CDR)	3	2020	3	2020
SPRITE (WAS): WAS Phase I Prototype Development and Integration	2	2020	4	2021